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Attorney Docket No. IMMR-070/01US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

re application of Louis B. ROSENBERG et al.

Serial No.:

09/678,110

Examiner:

Alecia Diane Nelson

Filed:

For:

MAY 2 8 2004

October 2, 2000

Art Unit:

2675

Confirmation No.: 4151

ROTARY FORCE FEEDBACK WHEELS FOR REMOTE CONTROL DEVICES

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INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Enclosed is an Information Disclosure Statement and accompanying Form PTO/SB/08A for the above-identified patent application.

[x]	In accordance with 37 C.F.R. §1.97(b), no additional fee for submission of the IDS is required.
[]	In accordance with 37 C.F.R. §1.97(c), also enclosed is:
	[] the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p); or
	[] a statement as specified in 37 C.F.R. §1.97(e).
	In accordance with 37 C.F.R. §1.97(d), a statement as specified in 37 C.F.R. § 1.97(e) and the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p) are also enclosed.
[]	Check No in the amount of \$ for the total fee is attached.
[]	A return receipt postcard is also enclosed.
[]	Please charge \$ to Deposit Account No. 50-1283 for the total fee. This paper is being submitted in duplicate.

Application Serial No.: 09/678,110 Attorney Docket No.: IMMR-070/01US

Page 2

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R.

§§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-1283.

Dated: May 28, 2004

Cooley Godward LLP ATTN: Patent Group One Freedom Square Reston Town Center 11951 Freedom Drive Reston, VA 20190-5656 Tel: (703) 456-8000

Tel: (703) 456-8000 Fax: (703) 456-8100

206763 v1/RE 4FJF01!.DOC Respectfully submitted, COOLEY GODWARD LLP

Ву:

Erik B. Milch Reg. No. 42,887 Attorney Docket No. IMMR-070/01US

PATENT

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INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97(b)

In accordance with the duty of disclosure set forth in 37 C.F.R. §1.56, Applicant(s) hereby submits the following information in conformance with 37 C.F.R. §§1.97 and 1.98.

- [x] Pursuant to 37 C.F.R. §1.98, a copy of each document cited in the attached Form PTO/SB/08 (1 of 2) is provided on the enclosed CD.
- [x] No copies of the publications listed on the attached Form PTO/SB/08A (2 of 2) are being provided pursuant to 37 C.F.R. §1.98(d) because the publications were previously cited by or submitted to the Office in prior Application Serial No. 09/049,155 (now U.S. Patent No. 6,128,006) to which the above-identified application claims priority under 35 U.S.C. §120.
- [x] No copies of the publications listed on attached Form 1449 are being provided because the references were listed in an Information Disclosure Statement filed December 10, 2001, for which the Applicants did not receive written confirmation of the references being considered by the Examiner. The references listed on the Form 1449 that are identified by the asterisk (*) were previously cited by or submitted to the Office in prior Application Serial No. 09/049,155 (now U.S. Patent No. 6,128,006) to which the above-identified application claims priority under 35 U.S.C. §120.
- [] No copies of any U.S. patents or U.S. patent application publications listed on the attached Form PTO/SB/08A are being provided pursuant to 37 C.F.R. §1.98 because this application was filed after June 30, 2003.

Application Serial No.: 09/678,110 Attorney Docket No.: IMMR-070/01US Page 2

[foreign			Form PTO/SB/08A were cited in a esponding to application serial no.		
[Enclosed is a copy of a non-English publication(s) Pursuant to §609 of the M.P.E.P., Applicant submits the attached foreign search or examination report, which cites such non-English language publication(s).					
[ication(s) English language iority from this non-English publication.		
[_		ed is an explanation of nation is not available.	on-Englisl	h publication(s) for which an English		
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periods:	This Information Disclosure Statement is filed within any one of the following time periods:						
			within three months from than a CPA under 37 C.		g date of this national application other 3(d);		
		[]	within three months from in 37 C.F.R. §1.491 in t		of entry of the national stage as set forth tional application;		
		[]	before the mailing date	of a first o	ffice action on the merits; or		
		[x]	before the mailing of a to continued examination		action after the filing of a request for C.F.R. § 1.114.		
I	t is res _l	pectfull	y requested that the Exa	miner con	sider the above-noted information and		
return an	initial	led cop	y of the attached Form P	TO/SB/08	A to the undersigned.		
Dated: 1	May 28	3, 2004			Respectfully submitted, COOLEY GODWARD LLP		
ATTN: I One Free Reston T 11951 Fr Reston, Tel: (703	Cooley Godward LLP ATTN: Patent Group One Freedom Square Reston Town Center 11951 Freedom Drive Reston, VA 20190-5656 Tel: (703) 456-8000 Fax: (703) 456-8100		556	Ву:	Erik B. Milch Reg. No. 42,887		

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2675

Complete if Known Substitute for form 1449A/PTO **Application Number** 09/678,110 INFORMATION DISCLOSURE October 2, 2000 Filing Date STATEMENT BY APPLICANT **First Named Inventor** Louis B. Rosenberg

Art Unit

(use as many sheets as necessary)

Alecia Diane Nelson Examiner Name 3 IMMR070/01US Sheet of Attorney Docket Number

			U.S. PATENT DOC	OINIEM 19	
Examiner	Cite No.1	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	Al	6,422,941	7/23/2002	Thorner et al.	
	A2	6,160,489	12/12/2000	Perry et al.	·
	A3	6,111,577	8/29/2000	Zilles et al.	
	A4	5,690,582	11/25/1997	Ulrich et al.	
	A5	5,575,761	11/19/1996	Hajianpour	
	A6	5,437,607	8/1/1995	Taylor	DEOCUL
	A7	5,436,622	7/25/1995	Gutman et al.	RECEIVE
	A8	5,283,970	2/8/1994	Aigner	
	A9	5,186,695	2/16/1993	Mangseth et al.	.IUN 0 3 2 0 04
	A10	5,175,459	12/29/1992	Danial et al.	33 • • •
	All	5,165,897	11/24/1992	Johnson	Technology Center 2
	A12	5,022,384	6/11/1991	Freels	reciliology certer a
-	A13	4,885,565	12/5/1989	Embach	
	A14	4,484,191	11/20/1984	Vavra	
	A15	4,464,117	8/7/1984	Foerst	
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	A17	4,262,549	4/21/1981	Schwellenbach	
	A18	4,127,752	11/28/1978	Lowthorp	
	A19	2,972,140	2/14/1961	Hirsch	

	Cite No.1	Foreign Patent Document			Name of Patentee or	Pages, Columns, Lines,	
Examiner Initials*		Country Code ³	Number ⁴	Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear
	BI	JP	H2-185278		7/19/1990	Taito Corporation	
	B2	JP	H4-8381		1/13/1992	Epoch Co. and Key- Planning Co.	
	В3	JP	H7-24147		1/27/1995	Sega Corporation	
	B4	JP	H5-192449		8/3/1993	Taito Corporation	

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				Application Number	09/678,110	DECEMED					
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STA	STATEMENT BY APPLICANT			First Named Inventor	Louis B. Rosenberg						
				Art Unit	2675	JUN 0 3 2004					
(use as many sheets as necessary)		Examiner Name	Alecia Diane Nelson								
Sheet	2	of	3	Attorney Docket Number	IMMR070/01US	Technology Center 2600					

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
"	Cl	PATRICK, "Design, Construction, and Testing of a Fingertip Tactile Display for Interaction with Virtual and Remote Environments," <i>Master of Science Thesis</i> , MIT, Aug. 1990, archived Nov. 8, 1990.
	C2	CALDER, "Design of A Force-Feedback Touch-Introducing Actuator For Teleoperator Robot Control," Bachelor of Science Thesis, MIT, May 1983, archived June 23, 1983.
	C3	WIKER, "Teletouch Display Development: Phase 1 Report," <i>Technical Report 1230</i> , Naval Ocean Systems Center, San Diego, July 1988.
	C4	BLISS, "Optical-to-Tactile Image Conversion for the Blind," <i>IEEE Transactions on Man-Machine Systems</i> , Vol. MMS-11, No. 1, March 1970.
,	C5	JOHNSON, "Shape-Memory Alloy Tactile Feedback Actuator," Armstrong Aerospace Medical Research Laboratory, AAMRL-TR-90-039, August, 1990.
	C6	KONTARINIS et al., "Tactile Display of Vibratory Information in Teleoperation and Virtual Environments," PRESENCE, 4(4):387-402, Harvard Univ., 1995.
	C7	AUKSTAKALNIS et al., "Silicon Mirage: The Art and Science of Virtual Reality," ISBN 0-938151-82-7, pp. 129-180, 1992.
	C8	EBERHARDT et al., "Inducing Dynamic Haptic Perception by The Hand: System Description and Some Results," DSC-Vol. 55-1, <i>Dynamic Systems and Control</i> : Volume 1, ASME 1994.
	C9	GOBEL et al., "Tactile Feedback Applied to Computer Mice," International Journal of Human-Computer Interaction, Vol. 7, No. 1, pp. 1-24, 1995.
	C10	PIMENTEL et al., "Virtual Reality: through the new looking glass," 2 nd Edition; McGraw-Hill, ISBN 0-07-050167-X, pp. 41-202, 1994.
	CII	"Cyberman Technical Specification," Logitech Cyberman SWIFT Supplement to Logitech Mouse Technical Reference and Programming Guide, 4/5/1994.
	C12	OUHYOUNG et al., "The Development of A Low-Cost Force Feedback Joystick and Its Use in the Virtual Reality Environment," <i>Proceedings of the Third Pacific Conference on Computer Graphics and Applications, Pacific Graphics</i> '95, Seoul, Korea, 21-24 August 1995.
	C13	KACZMAREK et al., "Tactile Displays," Virtual Environment Technologies, Chap. 9, pp. 349-414.
	C14	LAKE, "Cyberman from Logitech," at http://www.ibiblio.org/GameBytes/issue21/greviews/cyberman.html, 1994.
	C15	"Component Maintenance Manual With Illustrated Parts List, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 28 January 2002 (3 pages).

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	e for form 1449A/PTO)			Complete if Known	
				Application Number	09/678,110	
INFC	RMATION	DIS	CLOSURE	Filing Date	October 2, 2000	
STA	STATEMENT BY APPLICANT			First Named Inventor	Louis B. Rosenberg	
				Art Unit	2675	
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Sheet	3	of	3	Attorney Docket Number	IMMR070/01US	

OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS						
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
	C16	"Technical Manual Overhaul Instructions With Parts Breakdown, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 15 July 1980 (23 pages).				
	C17	SCANNELL, "Taking a Joystick Ride," Computer Currents, Boston Edition, Vol. 9, No. 11, November 1994				
	C18	YAMAKITA et al., "Tele-Virtual Reality of Dynamic Mechanical Model," Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots and Systems, Raleigh, NC, July 7-10, 1992				
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	C20	ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance In Telepresence Tasks," <i>Ph.D. Dissertation</i> , Stanford University, June 1994.				

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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 Atty Docket No.:	Application No.:
IMM1P044A pplicant: Rosenber iling Date:	09/678,110
Applicant:	
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10/2/01	2675

U.S. Patent Documents

Patent No. Date	Drennen et al. Wright et al. Repperger Williams Clark	Class 340 64 74 244 340 340 381 340 340 414 60 74	Sub- Class 172.5 11 553 223 825 709 109 710 365 5 393 471	Filing Date 5/26/71 8/3/76 2/18/77 12/15/82 9/17/82 7/5/84 6/10/86 12/4/84 1/2/85 11/17/86 2/13/87	
* 3,919,691 11/11/75 * 4,050,265 9/27/77 * 4,131,033 12/26/78 * 4,477,043 10/16/84 * 4,560,983 12/24/85 4,692,756 9/8/87 * 4,706,294 11/10/87 * 4,712,101 12/8/87 * 4,782,327 11/1/88 * 4,795,296 1/3/89	Noll Drennen et al. Wright et al. Repperger Williams Clark Ouchida Culver Kley et al. Jau Cemenska et al. Culver	340 64 74 244 340 340 381 340 340 414 60 74	172.5 11 553 223 825 709 109 710 365 5 393	5/26/71 8/3/76 2/18/77 12/15/82 9/17/82 7/5/84 6/10/86 12/4/84 1/2/85 11/17/86 2/13/87	
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* 5,138,154 8/11/92	Hotelling	250	231.12	4/4/90	
* 5,139,261 8/18/92	Openiano	273	148	9/18/91	1
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Atty Docket No.:	Application No.:
IMM1P044A	09/678,110
Applicant:	
Rosent	oerg et al.
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Application No.: 09/678,110

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